Chapter 1: Introduction

The Wisconsin Rail Issues and Opportunities Report summarizes nine rail transportation issues. This report reflects, in part, input from the general public and from advisory committees representing a wide array of transportation stakeholders.

A comprehensive review of public policies concerning rail transportation in Wisconsin is anticipated as part of Connections 2030, the Wisconsin Department of Transportation's (WisDOT) multimodal transportation plan. The issues and opportunities discussed in this report will serve as a point of departure for Connections 2030.

Purpose and need

Increasing productivity and the emergence of new international markets are expected to produce — even under a conservative economic growth scenario — as much as a doubling of current freight movements in this country by the year 2020. Large portions of the state's transportation infrastructure were built to accommodate freight and passenger movement patterns that are likely to be vastly different from those of the future. Rail corridors with connections to international ports of entry, including those located in Wisconsin, are expected to experience significant transportation pressures.

This increase in freight movements, combined with congestion problems that are already appearing on many segments of Wisconsin's highways, is an incentive for Wisconsin government and business leaders to focus on what actions might be needed now to keep Wisconsin's freight and people moving as efficiently and safely as possible in the future.

Source: Canadian Pacific Railway

Importance of rail

Rail will continue to be an important mode of transportation in Wisconsin's economy for the following reasons:

- Production output levels of key Wisconsin industries that use rail are expected to grow over the next two decades.
- Rail service provides a low cost transportation alternative for the high volume, lower value commodities that are essential to many of Wisconsin's traditional manufacturing industries.
- Rail service continues to be the primary mode of transport for coal, Wisconsin's primary energy source.
- Rail freight movement between Wisconsin, Canada, and Mexico is expected to continue to grow. Containerized shipments to and from overseas are anticipated to increase significantly.
- Intercity passenger rail is a transportation option that can help individuals and business travelers avoid congestion on highways and uncertainty in the air travel industry.

➤ Intercity passenger rail provides a mobility alternative to those who cannot, or choose not to, drive or fly.

Overview of the state's rail network

This section provides background information on Wisconsin's rail network. Different railroads own individual portions of the network. Transportation is provided for products as well as passengers. Although intercity passenger rail service is provided by a distinct operating entity, it functions entirely on portions of the existing freight network. For purposes of this report, intercity passenger rail and roadway/railway crossings are considered components of the overall rail network. Both of these components are discussed in greater detail in Chapter 2.

Wisconsin's freight rail network mirrors the nation's. The state network is comprised of major railroads that serve large portions of North America, regional railroads that serve a small combination of states, and small, short-line railroads that serve local areas. Based on federal Surface Transportation Board (STB) definitions, Wisconsin is served by four major (Class I) railroads, three regional railroads, and four local railroads.[1] Table 1-1 and Figure 1-1 depict the railroads operating in Wisconsin.

Over the last ten years, the amount of Wisconsin track-miles owned by railroads has declined, due in large part to the consolidation of railroad operators and the subsequent elimination of duplicate routes. Since the merger of the Canadian National Railway Company (CN) and Wisconsin Central Transportation Corporation (WC) in 2001, four Class I railroads now own approximately 80% of the rail lines within Wisconsin. CN owns nearly 1,800 miles of track in the state, nearly half the total mileage.

Historically, Wisconsin has had an imbalanced freight system—more freight flows into the state than out, and a large portion is "overhead" traffic flowing through the state. Freight shipments fluctuated considerably from 1996 to 2000 due to a variety of factors. These included changes in the national economy, changes in contracts for commodity movements by rail, changes in haulage agreements between railroads, and service disruptions caused by mergers and acquisitions that took place during this time period. Table 1-2 provides a synopsis of freight rail flows from 1996–2000.

A recent commodity forecast predicts growth in state freight rail tonnage of 51% by the year 2020.[2] Projected growth for Wisconsin's major rail commodities include intermodal shipments (126%); clay, concrete, glass, or stone (94%); food or kindred products (91%); pulp, paper, or allied products (72%); and lumber or wood products (67%). Shipments of Wisconsin's single largest rail commodity— coal— are projected to increase by 53% by 2020. Other rail commodity increases include nonmetallic minerals (46%), farm products (32%), and metallic ores (8%).

Table 1-1: Wisconsin Railroad Miles Operated 2002

Class I Railroads		Regional Railroads		Local Railroads	
Canadian National (CN)	1,781	Wisconsin & Southern (WSOR)	531	Escanaba & Lake Superior (ELS)	109
Union Pacific (UP)	584	Iowa, Chicago & Eastern (IC&E)	15	Wisconsin Great Northern (WGN)	19
Canadian Pacific Railway (CPR)	326	Duluth, Missabe & Iron Range (DMIR)	12	Municipality of East Troy (METWR)	7
Burlington Northern Santa Fe (BNSF)	276			Tomahawk Railway (TR)	4

Source: WisDOT Bureau of Planning

Figure 1-1: December 2002 Wisconsin Rail System

Source: WisDOT Bureau of Planning

Table 1-2: Wisconsin Freight Rail Shipments 1996–2000 (millions of tons)

Type Shipment	1996	1997	1998	1999	2000	Avg.
Originating Tons	12.9	20.6	16.7	17.6	16.7	16.9
Terminating Tons	64.2	87.2	76.9	78.7	70.6	75.5
Overhead Tons	52.4	61.7	65.1	68.1	67.2	62.9
Total Tonnage	**129.5**	**169.5**	**158.7**	**164.5**	**154.6**	**155.4**

Source: WisDOT analysis of the STB Waybill Sample

The largest 2020 increases in tonnage are projected for coal (20.7 million additional tons), chemicals (7.4 million additional tons), pulp and paper products (7.0 million additional tons), intermodal (6.8 million additional tons), food products (6.7 million additional tons), and lumber or wood products (6.0 million additional tons).

The trucking industry's share of freight shipments in 2020 (when compared to 1996 base figures) are expected to increase from 58% to 64% and the rail share is expected to decrease from 33% to 29%. Trucks have been, and are expected to continue to be, the dominant freight transportation mode in Wisconsin. (*See Figure 1-2.*)

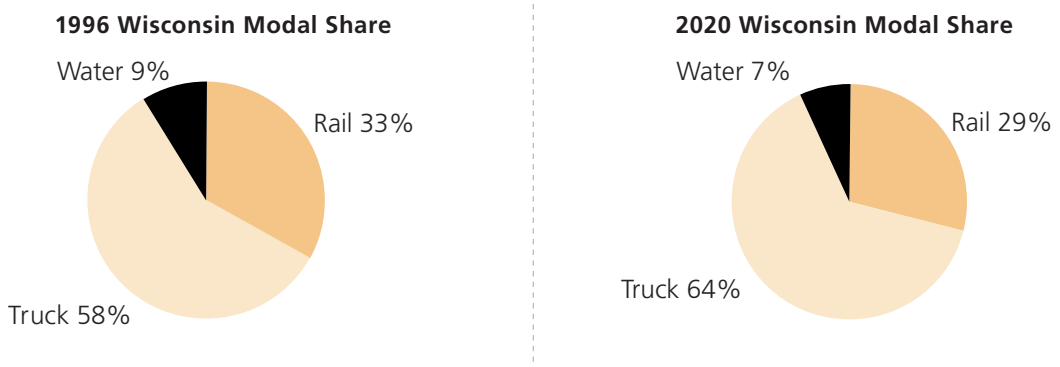
By 2020, 1,550 miles of Wisconsin's privately owned rail lines will be part of corridors carrying less than 3 million gross tons annually.[3] These "light density" lines could require financial assistance in order to preserve rail service and avoid abandonment of track (*See Figure 1-3*). Tonnage increases projected for 2020 are almost exclusively concentrated on mainline corridors and not on those identified here as "light density" lines.

Wisconsin DOT's role

WisDOT's current role in the freight railroad business is focused on helping retain or improve rail service in partnership with rail service customers, private railroads and local units of government. Public funding for freight rail purposes in Wisconsin has primarily been from state revenues.

WisDOT administers two assistance programs specifically for freight rail projects, the Freight Railroad Preservation Program (FRPP) and the Freight Railroad Infrastructure Improvement Program (FRIIP). WisDOT also administers the

Figure 1-2: Actual and Projected Freight Shipments by Mode



Source: Reebie Associates

Figure 1-3: Projected Wisconsin 2020 Freight Rail Density

Source: WisDOT Bureau of Planning

Transportation Economic Assistance (TEA) program, which has a broader focus but can be used to make railroad infrastructure improvements.

The FRPP grant program provides financial assistance to railroads, rail service customers and units of government to help preserve and improve service that might otherwise be lost. FRPP provides grants to fund up to 80% of the cost for several project types:

- To purchase abandoned rail lines in an effort to continue freight service, or for the preservation of the opportunity for future rail service.
- To rehabilitate infrastructure, such as tracks or bridges on publicly owned rail lines.
- To facilitate connectivity to a different transportation corridor as a viable alternative to rail line acquisition or rehabilitation.

The FRIIP loan program provides low interest loans to railroads, rail service customers and units of government for rail projects meeting one or two of these goals:

- Connect an industry to the national railroad system.
- Make improvements to enhance transportation efficiency, safety, and intermodal freight movement.
- Accomplish line rehabilitation.
- Assist business and industrial expansion.

Source: Escanaba & Lake Superior Railroad

The TEA program provides 50% state grants to local units of government for road, rail, harbor and airport projects that help attract employers to Wisconsin, or encourage businesses and industries to remain and expand in the state. Grants of up to $1 million are available for transportation improvements that are essential for an economic development project.

Between 1993 and 2002, nearly $73 million of public funding was distributed by WisDOT for freight rail assistance. This assistance primarily funded infrastructure improvements such as track reconstruction and extensions through the FRIIP loan program. The remaining expenditures were from FRPP grants and the TEA program.

The state's role in intercity passenger rail consists primarily of funding a portion of the cost of Amtrak's Hiawatha Service operating between Milwaukee and Chicago. The state also owns the Milwaukee Amtrak station and manages grants for passenger station improvements. In addition the state conducts intercity passenger rail studies. These programs are discussed in greater detail in Chapter 2.

With respect to rail safety, the state helps plan, fund, and manage roadway/railway crossing improvements along passenger and freight rail corridors. These programs are also covered more extensively in Chapter 2.

Implications

Several of the rail trends discussed in this chapter may justify reexamining the state's role regarding rail transportation.

- A majority of Wisconsin's railroads are now owned by major (Class I) railroads. The concentration of ownership in a few large railroads and a greater focus on improving the speed and efficiency of overhead traffic could create some challenges to state industries interested in maintaining a rail transportation option. Facilitating discussions between Wisconsin industries and major and/or regional railroads may be a necessary role for WisDOT or other state agencies.
- If the trend continues toward fewer railroads operating on less track, additional money may be needed to not only preserve existing freight service in areas that are faced with abandonment, but to aid the state in potentially preserving entire rail corridors for future transportation needs.
- Future freight transportation patterns and resulting problems are likely to require solutions that are different from those of the past. Transportation experts predict that freight and related passenger congestion is likely to remain localized with congestion at any given bottleneck capable of producing severe system wide repercussions.[4] An analysis of potential Wisconsin's freight chokepoints with an eye toward making the most cost effective infrastructure investments may be in order.[5]
- Additional freight traffic on rail mainlines could impact, or be impacted by, the implementation of passenger rail. The same track generally serves both systems. Increases in either freight or passenger service will also have an impact on roadway/railway crossing safety.

The state's role and involvement in rail matters is a complicated issue given that the majority of the rail system in Wisconsin is privately owned. WisDOT's role in the railroad business has historically been limited to supporting intercity passenger rail service, helping to retain or improve freight rail service in partnership with private railroads and local units of government, and improving roadway/railway crossing safety. Acquisition of rail infrastructure with state funds was not allowed until an amendment to the Wisconsin Constitution was passed by two successive legislatures and ratified by the electorate in 1992.

This chapter provided the context for the issues examined in this report. Chapter 2 will discuss the primary issues and outline opportunities for the state to add value as these important rail transportation issues get addressed.